

AMENDMENTS TO THE CLAIMS

The listing below of the claims presents in amended form claims 1 through 7 that were approved and accepted in the international phase of the corresponding PCT application. The following claims replace all prior versions and listings of claims in the present application:

Listing of Claims:

Claim 1 (currently amended): An electrical resistance element comprising: a glow zone and two power supply terminals, ~~where~~ wherein the glow zone (2) of the element is tubular, ~~characterised in that~~ ; a union (5, 6) ~~is provided between~~ extending from each of respective power supply terminals (3, 4) ~~and to~~ respective ends (7, 8) of the glow zone (2), ~~in that the~~ , wherein each union (5, 6) is tubular and ~~in that the union (5, 6) has generally~~ substantially the same outer diameter as the glow zone (2); ~~and in that the~~ , and wherein each union (5, 6) has at its an end facing towards the glow zone (2) ; a transition region adjacent an end of each union and glow zone end, the transition region having a successively progressively decreasing wall thickness in a direction from the union towards the glow zone and ~~in that~~ , wherein the glow zone (2) has generally substantially the same inner diameter as the largest inner diameter of the ~~union (5, 6)~~ transition region.

Claim 2 (currently amended): A resistance element according to Claim 1, ~~characterised in that~~ wherein the successively decreasing wall thickness is defined by a transition region inner surface having a radius that follows the

function $r = \frac{r_o}{\sqrt{l_o}} \sqrt{l}$, where l ~~coincides with~~ is a position along the longitudinal axis of the union (5, 6), r ~~corresponds to~~ is the inner radius of the union transition region at position l , l_o ~~corresponds to the~~ is overall length of the transition region along which the wall thickness decreases, and r_o ~~corresponds to~~ is the largest inner radius of the union transition region.

Claim 3 (currently amended): A resistance element according to Claim 1 or 2, ~~characterised in that~~ , wherein the largest inner radius of the union (5, 6) transition region is 3 - 5 times larger than its smallest inner radius.

Claim 4 (currently amended): A resistance element according to ~~any one of the preceding Claims, characterised in that the proportions of the element (1) are such that in the case of~~ claim 1, wherein for an element with a glow zone (2) that has an outer diameter of about 12 mm, its inner diameter ~~will be~~ is about 10 mm, while the union (5, 6) ~~will have~~ has an outer diameter of about 12 mm and a smallest inner diameter of about 3 mm ~~while~~ , and the ~~successively progressively~~ decreasing wall thickness of the union (5, 6) ~~will extend~~ transition region extends through a distance of about 16 mm.

Claim 5 (currently amended): A resistance element according to ~~any one of the preceding Claims, characterised in that~~ claim 1, wherein a respective union (5, 6) is welded to a respective ~~ends (7, 8) end~~ of the glow zone.

Claim 6 (currently amended): A resistance element according to ~~any one~~
~~of the preceding Claims, characterised in that~~ claim 1, wherein a respective union
~~(5, 6)~~ and a respective ~~terminals (3, 4)~~ power supply terminal together form a
one-piece structure.